

Claims:

1. A liquid crystal composition comprising liquid crystal molecules and an alignment promoter represented by the formula (I) in an amount of 0.01 to 20 wt.% based on the amount of the liquid crystal molecules:



in which Hb is a hydrophobic group selected from the group consisting of an aliphatic group having 4 to 40 carbon atoms, an aromatic group having 6 to 40 carbon atoms or an aliphatic substituted oligosiloxanoxy group having 1 to 40 carbon atoms; L¹ is a single bond or a divalent linking group; n is an integer of 2 to 12; and Bl is an n-valent group comprising at least two rings.

2. The liquid crystal composition as defined in claim 1, wherein Hb is a fluorine-substituted alkyl group having 4 to 40 carbon atoms, an alkyl group having 6 to 40 carbon atoms or a fluorine-substituted aryl group having 6 to 40 carbon atoms.

3. The liquid crystal composition as defined in claim 1, wherein L¹ is a single bond or a divalent linking group selected from the group consisting of an alkylene group, a fluorine-substituted alkylene group, -O-, -S-, -CO-, -NR-, -SO₂- and a combination thereof, and R is hydrogen or an alkyl group having 1 to 30 carbon atoms.

4. The liquid crystal composition as defined in claim 1, wherein n is an integer of 3 to 9.

5. The liquid crystal composition as defined in claim 1, wherein Bl is an n-valent group comprising at least three rings.

6. The liquid crystal composition as defined in claim 1, wherein Bl is an n-valent group showing an excluded volume effect

7. The liquid crystal composition as defined in claim 5, wherein Bl is an n-valent group represented by the formula (II):



in which Cy^1 is a divalent cyclic group; L^2 is a single bond or a divalent linking group; n is an integer of 2 to 12; and Cy^2 is an n-valent cyclic group.

8. The liquid crystal composition as defined in claim 7, wherein L^2 is a single bond or a divalent linking group selected from the group consisting of an alkylene group, an alkenylene group, an alkynylene group, -O-, -S-, -CO-, -NR-, -SO₂- and a combination thereof, and R is hydrogen or an alkyl group having 1 to 30 carbon atoms.

9. The liquid crystal composition as defined in claim 7, wherein each of Cy^1 and Cy^2 independently is an aromatic group or a heterocyclic group.

10. The liquid crystal composition as defined in claim 9, wherein Cy^1 is a divalent aromatic group.

11. The liquid crystal composition as defined in claim 10, wherein the divalent aromatic group of Cy^1 is combined with another aromatic ring by a single bond, vinylene bond or ethynylene bond, or is condensed with another aromatic ring.

12. The liquid crystal composition as defined in claim 9, wherein Cy^2 is an n-valent aromatic group.

13. The liquid crystal composition as defined in claim 7, wherein the cyclic groups represented by Cy^1 and Cy^2 form a plane molecular structure as a whole.

14. The liquid crystal composition as defined in claim 1, wherein B1 contains a photosensitive group that changes its chemical structure when absorbing light energy.

15. The liquid crystal composition as defined in claim 14, wherein the photosensitive group contains a double bond selected from the group consisting of $C=C$, $C=N$ and $N=N$.

16. The liquid crystal composition as defined in claim 14, wherein the photosensitive group is an aromatic azo group.

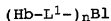
17. The liquid crystal composition as defined in claim 1, wherein the liquid crystal molecules are discotic liquid crystal molecules.

18. The liquid crystal composition as defined in claim 1, wherein the liquid crystal molecules are rod-like liquid crystal molecules.

19. The liquid crystal composition as defined in claim 1, wherein the liquid crystal molecules have polymerizable groups.

20. An optically anisotropic element which comprises a liquid crystal layer comprising liquid crystal molecules and an orientation layer provided on one side of the liquid crystal layer, wherein the liquid crystal layer further
5 contains an alignment promoter represented by the formula (I) in an amount of 0.005 to 0.5 g/m²:

(I)

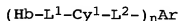


- 10 in which Hb is a hydrophobic group selected from the group consisting of an aliphatic group having 4 to 40 carbon atoms, an aromatic group having 6 to 40 carbon atoms or an aliphatic substituted oligosiloxanoxy group having 1 to 40 carbon atoms; L¹ is a single bond or a divalent linking group; n is an integer of 2 to 12; and Bl is an n-valent
15 group comprising at least two rings.

21. The optically anisotropic element as defined in claim 20, wherein the liquid crystal molecules are aligned at an average inclined angle of 50° to 90°.
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22. The optically anisotropic element as defined in claim 20, wherein the liquid crystal molecules are aligned and polymerized while keeping alignment.

23. An aromatic compound represented by the formula (III):



(III)

- 5 in which Hb is an aliphatic group having 6 to 40 carbon atoms or an aliphatic substituted oligosiloxanoxy group having 1 to 40 carbon atoms; L^1 is a single bond or a divalent linking group selected from the group consisting of an alkylene group, a fluorine-substituted alkylene group, -O-, -S-, -CO-, -NR-, -SO₂- and a combination thereof, and R is
10 hydrogen or an alkyl group having 1 to 30 carbon atoms; Cy^1 is a divalent aromatic group or a divalent heterocyclic group; L^2 is a single bond or a divalent linking group selected from the group consisting of an alkylene group, an
15 alkenylene group, an alkynylene group, -O-, -S-, -CO-, -NR-, -SO₂- and a combination thereof, and R is hydrogen or an alkyl group having 1 to 30 carbon atoms; n is an integer of 2, 3, 4 or 5; and Ar is an n-valent aromatic hydrocarbon group.